

## PLATE LXXIII.

- Fig. 1. *Adeonellopsis crosslandi*, sp. n.  $\times 250$ . Showing an ovarium in the distal end of the zoecium. From Wasin.
2. Do. do.  $\times 250$ . Showing round body under the operculum with the protoplasmic threads to the bands below.
3. *Adeonella platalea* Busk.  $\times 150$ . Showing the early stage of the ovicellular sac (s.) near the distal end containing the embryo (emb.). From Wasin (501).
4. Do. do.  $\times 85$ . Section showing the ovicellular zoecium nearly filled up by the embryo, with an ovarium (ovar.) now proximal to the embryo. From Wasin (501).
5. Do. do.  $\times 150$ . Section of embryo showing the zoecial wall (z.w.), the ovicellular sac (s.), and the embryo (emb.). The muscles are seen at the distal end on the right in the zoecial chamber. From Wasin (501).
6. *Adeonellopsis crosslandi*, sp. n.  $\times 250$ . Thick section of embryo showing the aboral end. Fig. 6a,  $\times 250$ . Diagrammatic outline of vertical section.
7. Do. do.  $\times 85$ . Operculum.
8. *Adeonella platalea* Busk.  $\times 85$ . Operculum.
9. *Osthimosia zanzibariensis*, sp. n.  $\times 85$ . Operculum.
10. *Lepralia turrita* Sm.  $\times 85$ . Operculum.
11. *Holoporella albirostris* Sm.  $\times 85$ . Polypide showing the long oral glands.
12. *Adeonellopsis crosslandi*, sp. n.  $\times 25$ .
13. Do. do.  $\times 50$ . Transverse decalcified section showing the opposite zoecia at about the same stage of development.
14. Do. do. Natural size.
15. *Osthimosia zanzibariensis*, sp. n.  $\times 50$ .
16. *Schizoporella nivea* Busk.  $\times 50$ . The two zoecia figured were near together but not in the same row, and are placed together to save space. A sac-like structure (sc.) is shown at the base of each ovicell (oc.), but of the numerous muscles in this sac only about half of those in focus are drawn. It seems that the ovum (ov.) passes into this sac which is then ruptured (r.), and the ovum is pressed forward into the ovicell where it segments. The small oral glands are shown (gl.).

35. Notes on Albinism in the Common Reedbuck (*Cervicapra arundinum*), and on the Habits and Geographical Distribution of Sharpe's Steenbuck (*Raphiceros sharpei*).  
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*Albinism in the Common Reedbuck (Cervicapra arundinum).*

During the early weeks of 1911 a rumour reached me of three white Reedbucks having been seen near the south-western border of the Sabi Game Reserve. I gave orders that they should be

kept under observation so far as possible, though the very broken and hilly nature of that area rendered any close following of their movements impracticable.

A month or two later a troop of hunting dogs (*Lycan pictus*) passed through that part of the country and, it is believed, killed one of the animals, as only two were afterwards seen. I then made preparations for an expedition to capture the survivors, if possible, for the Pretoria Zoological Gardens, but almost immediately afterwards heard that they had wandered out of the Game Reserve and that the male had been shot by some unknown person. Towards the end of 1911, the last survivor, a female, came back to the Reserve. The Museum authorities having expressed a desire to obtain the skin, failing success in capturing the animal alive, I proceeded to the ground. Under the circumstances it seemed that the capture would be very difficult, and that failure would almost certainly drive the animal out of the Reserve, where it would be killed at once by natives or white men, and so be irretrievably lost. I therefore shot it, and sent the skin, bones, and measurements to the Pretoria Museum, where it is now set up.

The animal proved to be a female about two years old, and of a perfectly pure white colour throughout. The muzzle and inside of the ears, membrane round the eyes, etc., were pinkish or flesh-colour.

The skin on the back of the ears was scabby and unhealthy-looking. Eyelashes white. Pupils reddish black. Inner irides grey blue. Outer irides pearly with darker rays. White of eyes normal. Hoofs and lateral hoofs pale horn colour, the former nearly white at bases.

Measurements for a two year old animal about normal.

Head and body 52 inches; tail  $7\frac{1}{2}$ ; fore girth 32.

When found she was running with an ordinary ram, and contained a perfectly formed male foetus, which was normal in all respects. I should be inclined to think, in view of the time which had elapsed since the disappearance of the male albino, that she had been impregnated by the normal ram with which she was found; but this is a point I cannot speak on with any certainty.

It is worth recording that within a mile of the spot where I saw this animal, and in the midst of the comparatively small area where these Reedbucks had been born and bred, was a village in which lived an albino male native, his hair nearly white, and his eyes of almost the same curious light grey-blue shade as those of the Reedbuck. Native information states that albino children have been born before in the same village, and that white Reedbucks have also been seen in former years in the district.

Some two months later (January 1912) a report came to hand of another albino Reedbuck at a point 60 or 70 miles north of where the female was secured. This animal was always noticed alone, and was repeatedly seen by passengers by the Selati train.

I sent a ranger up to endeavour to capture it alive, but attempts were unsuccessful, owing to the mesh of our net being too large. It was seen close enough, however, to be recognized as a female, nearly pure white and about one year old. After the unsuccessful attempts to capture her alive, she was noticed at intervals for another month; but before another attempt could be made, she disappeared, probably killed by wild dogs.

These animals, which may have been born in 1909 in the first case and 1910 in the second, were found at a considerable distance north and south of one another, and the incidents almost certainly had no connection whatever, but both occurred within a few miles of or among the foothills of the Drakensberg Mountains, on the western border of the Reserve. In nearly eleven years' careful observation of Reedbucks in the Reserve, these are the only cases of albinism that have been brought to my notice.

*Sharpe's Steenbuck* (*Raphiceros sharpei*).

*Spiti-pite* or *Pitsi-pitsi* of the Thonga tribes of the North-east Transvaal and neighbouring Portuguese East Africa.

*Isigulane* of the Swazis.

*Geographical Distribution.*—The most northerly habitat of the species appears to be British Nyasaland, where it was discovered and recorded by Sir A. Sharpe. Thence it extends down through Mashonaland, possibly hugging the vicinity of the eastern hilly country, to the North-eastern Transvaal. It is there found all along the course of the Lebombo Hills (but never in the Drakensberg Mountains, sixty miles further west) as far as the Crocodile River at Komati Poort. It becomes very numerous between the Limpopo and Letaba Rivers, and is there spread through broken ground to as much as thirty miles from the Lebombo. South of the Olifants it becomes progressively scarcer, and is very rare indeed between the Sabi and Crocodile Rivers. It reappears, however, in Swaziland (Mr. R. T. Coryndon), and is found all along the border of that country and Portuguese East Africa on both sides of the Lebombo. Mr. Coryndon is of the opinion that it occurs also in Northern Zululand—that is to say, as far as the end of the Lebombo Hills.

Whatever be the case in Nyasaland and Mashonaland, in the Transvaal and Swaziland it occurs only in one narrow strip comprising the Lebombo Hills and their immediate surroundings.

No antelope answering to the description seems to be reported from Natal or Northern Pondoland, and in the south of the latter we arrive at the extreme known northern limit of the Grysback (*R. melanotis*), at Port St. John's.

The geographical distribution of Sharpe's Steenbuck, therefore, seems to be between  $14^{\circ}$  and  $28^{\circ}$  south latitude, and between about  $31\frac{1}{2}^{\circ}$  and  $33\frac{1}{2}^{\circ}$  east longitude, the line of distribution following more or less the south-westerly trend of the coast, though at some distance from it.

There seems to be a gap of  $4^{\circ}$  of latitude in which no small grizzled antelopes are found between the most southerly habitat of Sharpe's Steenbuck and the most northerly of the Grysbeck ( $32^{\circ}$  south).

*Description.*—The animal found in the North-eastern Transvaal has been described from specimens obtained by Mr. Grant (collector for Mr. Rudd). Females and immature males are, generally speaking, of a brighter red colour than old males. The distribution and profuseness of the white in the coats tends to vary in different specimens, and some show more than others. Individuals display small patches of white hairs here and there on back or sides.

In a half-grown female the dark horseshoe mark on the crown was found to continue backwards in the form of a narrowing dark brown line as far as the centre of the back, where it suddenly broadened and then disappeared. In the same animal the face-markings were much more highly contrasted than in older specimens.

There are four mammæ present in the females.

I fancied that I detected a very slight thickening of the tissues at the points where the lateral hoofs are found in other species.

The horns of the males are very short and rather conical in shape. They seldom exceed an inch and a half in length, and I should imagine two inches to be about the maximum length.

Mr. Selous has recorded shooting certain small grizzled animals in the Mashonaland Hills which possessed horns over three inches long, and this seems to point, perhaps, to an interesting variation of the type in that country.

*Habits, etc.*—Sharpe's Steenbuck is found either in patches of thick bush, which may be at a considerable distance from any hilly country, or among the stones and boulders of the lesser ridges of the Lebombo Hills and the thick covert sometimes growing at their bases (North-eastern Transvaal). In no case has it been noticed at any very great distance from water. In the hill-country it especially favours the rough boulders interspersed with rank grass and bushes, crowning the crests of long stony ridges which gradually merge into grassy slopes on either side. Its colour almost exactly matches the red tint of the Lebombo rocks, and consequently, when it chooses to lie close, it is a most difficult creature to see. One or more individuals have a custom of returning to the same spot to deposit their droppings, but the habit is not a constant one. It feeds at night or in the very late evenings and early mornings, and, except on dull days, always lies up for the daylight hours among boulders or long grass. In cloudy weather, especially in spring, when the grass is young and fresh, it may be observed quite late in the day feeding close to one of its refuges, moving slowly about, and lying down at frequent intervals. In the stomachs examined, I have found about half the contents to consist of young grass and the rest of the small leaves of ground-shrubs.

When disturbed while lying up for the day, Sharpe's Steenbuck usually springs up 30 or 40 yards away, and makes off at once. Occasionally, however, when well concealed, it lies very close, and only gets up when approached within a few yards. In no case that I have observed did it ever pause before going, resembling many other small buck and hares in this respect. It always goes at best pace for a considerable distance, squatting again suddenly when it has found suitable covert. Its gait is a scuttling run, and it never bounds like a Steenbuck or a Duiker. Nevertheless, its speed is considerable, and, in the rough country affected, it takes a very good dog to run down an adult of either sex.

It is very solitary in habit, and even when a pair are put out of the same patch of bush, they seem generally to have been lying in different parts of it. Bush and rocks seem to be regarded equally as natural refuges, and in following up individuals I could not discover any preference for one over the other. Even in the heat of the day the shade of a large stone on a hillside, destitute of a blade of grass or a scrap of bush, is sometimes sufficient for the animal's requirements.

Most of the females appear to be in lamb (North-eastern Transvaal) in October and November, and I imagine the bulk of the young to be born in the early or mid summer months, though I should hesitate to affirm that they do not, like many other small buck, breed more or less all the year round.

From observation of appearance and habits in the field it would be impossible to recognize its kinship with the true Steenbuck. In habit it approximates much more closely to the Grys buck, for which it used often to be mistaken by hunters. The native (Thonga) name is *Spiti-pite* or *Pitsi-pitsi* for Sharpe's Steenbuck, while they call the Steenbuck *Inginana* and the Livingstone Antelope *Inhlengana*.

Mr. R. T. Coryndon, the Resident Commissioner of Swaziland, confirms these observations of the animal's habits in the North-eastern Transvaal as being applicable to what he has himself observed in Swaziland, and gives the Swazi name for it as *Isigulane*, for the Steenbuck *Ingina*, and for the Livingstone Antelope *Inhlengana*. The Zulus call the common Steenbuck *Iqina*. The natives therefore recognize, judging as they do merely from habits and outward appearance, no affinity between the two species of Steenbuck.

Sharpe's Steenbuck is generally spoken of by Colonists in South Africa as "Grys buck" or "Grys Steenbuck," and in this Province it received its proper title for the first time in the Game Laws of 1912.